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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,003	09/11/2003	Young-Bae Jung	21C-0085	5938
7590 08/23/2005			EXAMINER	
CANTOR COLBURN LLP			PARKER, KENNETH	
55 Griffin Road South			ART UNIT	
Bloomfield, CT 06002			PAPER NUMBER	
			2871	
DATE MAILED: 08/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/660,003

**Applicant(s)**

JUNG ET AL.

**Examiner**

Kenneth A. Parker

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24,26,27,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-24 is/are allowed.
- 6) ☒ Claim(s) 23,24,30 and 31 is/are rejected.
- 7) ☐ Claim(s) 26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 23-24, 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim 6025891 in view of Asai JP05150263**

Regarding claim 23, the Kim reference describes in column 3 a method of manufacturing a liquid crystal display device, the method comprising:

forming a first substrate including a display region and a peripheral region adjacent to the display region (the cover figure shows a display region and peripheral

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regions- it doesn't show a substrate, but anything the layers are on is by definition the substrate, so a substrate is inherent),

the display region having a plurality of data lines 2, a plurality of scan lines 1, a plurality of pixels (part of the definition of a TFT-LCD) and a connecting part (the portion of the signal lines between the display region and the peripheral region), each of the pixels having a switching device electrically coupled to one of the scan lines and one of the data lines (described in column 4, lines 39-68, and shown in figure 4), the connecting part formed in the peripheral region adjacent to first ends the scan lines (in Kim it is the opposite- near the data lines),

and the connecting part having a plurality of groups disposed in layers different from each other (NOT SHOWN- See obviousness argument above);

combining the first substrate with a second substrate and interposing a liquid crystal between the first and second substrates (required to make an LCD and therefore inherent).

The forming the first substrate includes: forming a first metal layer in the display region and the peripheral region; patterning the first metal layer to form the scan lines and gate electrodes branched from the scan lines on the display region (see figure 4) and to form the first connecting lines electrically coupled to the first group of the scan lines (see figure 4- the part from the array region to the edge of the shorting bar region, and the cover figure, and patterning is inherent to forming the patterned shapes, as the shapes have patterned and therefore must be patterned, deposition is described in column 3 line 55-68 ); forming an insulation layer (column 4, lines 35-37), an active

layer (column 5, lines 10-20 ) and a contact layer (conventionally employed to improve the device characteristics as an ohmic contact layer)

patterning the active layer and the contact layer to form an active pattern and a contact pattern (redundant to the discussion above);

forming a second metal layer on the first substrate on which the insulation layer, the active pattern and the contact pattern are formed (column 5, lines; and patterning the second metal layer to form the data lines, source electrodes branched from the data lines, (the data line is shown in figure 4 as the top or second metalization layer, however it is not clearly stated that that layer connects all the way out to to terminal, however such was the standard practice and one of ordinary skill would have been motivated to do such in order to avoid unnecessary connections and alignmnents); and drain electrodes spaced apart from the source electrode on the display region (figure 4).

Lacking from the disclosure is just the second connecting lines electrically coupled to a second group of the scan lines directly. The secondary reference shows dividing the connection parts into two layers and directly connecting so as to enable prevention of shorting (abstract). As the use of both would require using the source layer for some gate lines and the gate layer for the data lines, thereby modifying the reference to meeting the claim. Therefore, one of ordinary skill would have found reason, motivation and suggestion to modify the Kim reference to meet the claimed limitation for the reason given above and described in the secondary reference.

Regarding claim 24 the reference shows the method of claim 23, wherein the first connecting part includes: a first group having a plurality of first connecting lines formed

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from a same layer as the scan lines; and a second group having a plurality of second connecting lines formed from a same layer as the data lines (both layers are used).

Claim 30 has the first and second connecting lines formed of the same layer as the scanning and data lines lines, which met in accordance with the discussion above.

***Allowable Subject Matter***

Claims 1-22 are allowed.

Claims 26-27

The following is a statement of reasons for the indication of allowable subject matter: (claims 1-22)The closest references, Kim and Asakura, fail to show the lines in both layers connecting as claimed. Yamate does show scanning lines in both layers, but fails to show both on the same side, as they run to different drive circuits.

Regarding claim 26 none of the references showed or rendered obvious shows the method of claim 23, wherein patterning the active layer and the contact layer further includes forming a double insulation layer on the peripheral region to be interposed between the insulation layer and the second connecting layer ;

Regarding claim 27 none of the references showed or rendered obvious shows the method of claim 25 wherein patterning the active layer and the contact layer further includes forming a contact hole on the insulation layer, the active layer and the contact layer so that the contact hole exposes an end of the second group of the scan lines .

### ***Response to Arguments***

Applicant's arguments with respect to the claims 23-24 have been considered but are moot in view of the new ground(s) of rejection. Regarding claims 30-31, to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A. Parker whose telephone number is 571-272-2298. The examiner can normally be reached on M-F 10:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kenneth A Parker  
Primary Examiner  
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